I. AMENDMENT

Amendments to the Claims

Please cancel claims 2-4 and 15-33.

Please amend claim 1 as indicated below.

1. [Amended] A method of expressing a heterologous nucleic acid sequence in a vascular cell *in vivo* comprising administering to a blood vessel of a mammal [the cell] a recombinant replicating herpes simplex viral vector lacking at least one expressible $\gamma_1$34.5 gene and operably comprising a heterologous nucleic acid[, wherein the herpes simplex virus is debilitated for growth in the central nervous system].

2-4. Canceled.

5. The method of claim 1, wherein the recombinant HSV vector lacks two expressible $\gamma_1$34.5 genes.

6. The method of claim 1, wherein the vascular cell is an endothelial cell.

7. The method of claim 1, wherein the vascular cell is a smooth muscle cell.

8. The method of claim 1, wherein the vascular cell is an adventitial cell.

9. The method of claim 1, wherein the heterologous nucleic acid sequence encodes a polypeptide.

10. The method of claim 9, wherein the polypeptide is selected from the group consisting of an antiproliferative polypeptide, a vasodilatory polypeptide, and an angiogenic polypeptide.

11. The method of claim 1, wherein the heterologous nucleic acid sequence encodes an antisense oligonucleotide or antisense polynucleotide.

12. The method of claim 11, wherein the antisensense oligonucleotide or antisense polynucleotide is complementary to an RNA encoding an antiproliferative polypeptide, vasodilatory polypeptide, or angiogenic polypeptide.

13. The method of claim 1, wherein the herpes simplex virus is HSV-1.

14. The method of claim 1, wherein the herpes simplex virus is HSV-2.

15-33. Canceled.

Please add new claims 34-50.

34. [New] The method of claim 1, wherein the recombinant replicating herpes simplex virus is administered by a catheter.

A2

35. [New] The method of claim 34, wherein the catheter comprises a balloon.

36. [New] The method of claim 1, wherein the blood vessel is an artery.

37. [New] The method of claim 1, wherein the blood vessel is a vein.

38. [New] The method of claim 1, wherein the blood vessel is the heart.

39. [New] The method of claim 1, wherein the vascular cell is a neointimal cell.

40. [New] The method of claim 1, wherein less than 10^9 pfu per ml of the vector is administered.

41. [New] The method of claim 40, wherein less than 10^8 pfu per ml of the vector is administered.

42. [New] The method of claim 1, wherein the heterologous nucleic acid sequence is expressed at least 7 days after the administration of the vector.

43. [New] The method of claim 42, wherein the heterologous nucleic acid sequence is expressed at least 28 days after the administration of the vector.

44. [New] The method of claim 43, wherein the heterologous nucleic acid sequence is expressed at least 70 days after the administration of the vector.

45. [New] The method of claim 1, further comprising the step of administering to the mammal an amount of an antiviral agent effective to attenuate infection by the recombinant replicating herpes simplex viral vector.

46. [New] The method of claim 1, further comprising the step of administering to the mammal an amount of an antiviral agent effective to eliminate infection by the recombinant replicating herpes simplex viral vector.

47. [New] The method of claim 45, wherein the antiviral agent is a nucleoside analog.

A7 Cont'd

48. [New] The method of claim 46, wherein the antiviral agent is a nucleoside analog.

49. [New] The method of claim 47, wherein the nucleoside analog is acyclovir or a pharmaceutically acceptable salt thereof.

50. [New] The method of claim 48, wherein the nucleoside analog is acyclovir or a pharmaceutically acceptable salt thereof.